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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,218	02/05/2002	Wolfgang Schmutz	390-010641-US(PCT)	5544

2512 7590 09/10/2004

PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06824

EXAMINER

BRAHAN, THOMAS J

ART UNIT PAPER NUMBER

3652

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,218

Applicant(s)

SCHMUTZ ET AL

Examiner

Thomas J. Brahan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. Claim 6 remains withdrawn from consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic claim. The requirement having been made final in the Final Rejection mailed February 13, 2004.
2. Claim 19 has been renumbered as claim 18, as per 37 CFR 1.126.
3. The disclosure is objected to for the following informalities. In the amendment for the specification for the paragraph beginning on page 5, line 1 through page 8, line 25, (see page 5 of the amendment filed November 19, 2003), line 8 recites a bottom 663 of the cassette which appears to be a typo. Also line 11 has the cassette box 13 being lowered to the level of the manipulating device 51. However the cassette 12 is lowered from the box cover, as shown in figure 1, the cover of the box remains in the storage area.
4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). The claims are drawn to a "Device for manipulating substrates inside and outside of an ultraclean room. The terminology of the specification identifies two manipulating devices, manipulating device (31) and manipulating device (51). However neither of these manipulating devices moves the substrates inside and outside of the clean room. There is also no basis in the specification for a storage room that overhangs the clean room as now recited in claim 1. The term "overhanging appears to be misused in the claim. Appropriate correction is required.
5. The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the storage room overhanging the clean room, as recited in line 14 of claim 1, the boxes arranged in a row arrangement, i.e. a single row, and the boxes arranged in a column arrangement, i.e. a single column, recited in line 13 of claim 1, and in line 12 of claim 2, must be shown, or the feature must be canceled from the claims. No new matter may be entered.
6. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
7. Claims 1-5, 8-14, and 16-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. it is unclear as to how the elected embodiment of the claim invention can work as disclosed. When manipulating device (31) removes the cassette (13) from the

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sluice locking unit (18) it takes the bottom of the cassette (63) with the cassette. This leaves an opening at the locking unit (18); note that only a rod (48) is disclosed as supporting the cassette bottom as to have nothing closing the opening. How can the "ultraclean room" remain ultraclean with such a large opening at the sluice device?

8. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.

9. Claims 1-5, 8-14 and 16-18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. For example:

a. The claim structure used by applicant is not fully understood. It is unclear as to whether the applicant is considering the first 11 lines of claim 1 as the preamble of a Jepson format claim, see 37 CFR 1.17(e), as to have only the limitations after the phrase "is hereby characterized in that" as the improvement portion of the claim, see *In re Fout*, 675 F.2d 297, 301, 213 USPQ 532 534 (CCPA 1982). As claim 1 is written, the first eleven lines are the preamble, and is acknowledged prior art. The claim structure of claim 2 is similar to the structure of claim 1 and is not understood.

b. It is unclear as to how the applicant is considering the invention as a device for manipulating substrates, as put forth in the first three lines of claim 1. The claim as written is drawn to a device "for manipulating substrates inside and outside an ultraclean workroom with a storage room and a sluice device". As written, everything after the term "for" in this phrase is the intended use of the device. The phrase does not positively include ultraclean workroom, the storage room or the sluice device as part of the claimed invention. It is therefor unclear as to how the claim can end with a limitation "characterized in that the storage room is adapted for holding a multiple number of the boxes.....". The claim does not further limit the manipulating device, it further limits the environment, i.e. the storage room, which is not even positively claimed as in the combination of claimed elements.

c. In claim 1, lines 12 and 13, the term "the boxes" lacks antecedent basis within the claims. Note that the claim provides a basis for a single box in line 7, but not for plural boxes.

d. In claim 1, lines 12-14, the limitation "the boxes accommodated in row and/or column arrangement on substantially the entire ultraclean workroom" is not understood. The use of the term "and/or" has the limitation drawn to undisclosed combinations, such as arrangements with just a row or just a column. Claim 2 is indefinite for the same reasons.

e. In the penultimate line of claim 1, it is unclear as to how the applicant is claiming the storage room as "overhanging" as the definition of overhanging, see www.dictionary.com is "to project or extend beyond". The storage room extends over the clean room, but not beyond it.

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f. In claim 2, it is unclear as to how the applicant is considering the invention as a device for manipulating substrates, the device is claimed "for manipulating substrates inside and outside an ultraclean workroom with a storage room and a sluice device", as to be the intended use of the device, while the claimed improvement is not drawn to device.

g. In claim 3, it is unclear as to what applicant is considering as the sluice door of the first embodiment. The second embodiment is shown as having a sluice door (18'), but no such door is shown in figure 1. Figure 1 only has the platform (63) of the cassette shown. As the platform leaves when the cassette is taken upward to be stored, it is not really part of the sluice device.

h. Claim 3 is also confusing as it recites that the component (63) is part of the box (13), while the specification has it as part of cassette (12).

i. Claim 5 is redundant as it recites that the sluice door is formed by a platform of the cassette box, without an indication that this is the same element referred to as the component of the box of claim 3.

j. In claim 5, the term "the cassette box" lacks antecedent basis in the claims, as claim 2 provides a basis for boxes, not cassette boxes.

k. In claim 9, it is clear as to how the first manipulating device is being considered as provided between the working chambers. The drawings show the manipulating device located alongside the working chambers, not between them.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

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12. Claims 1, 13, 14 and 16, as best understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by Iwai et al. Figure 11 of Iwai et al shows a device for manipulating substrates inside and outside of an ultraclean workroom (the room between walls 120 and 154) with a storage room (at shelves 151) over the ultra clean room with a sluice device (see figure 15) between the ultraclean room and the storage room. The storage unit of Iwai et al has two input openings, see figure 4, as recited in claim 13 and 14. Iwai et al has a manipulating device gripping unit (at 152) as recited in claim 16.

13. Claims 2-5, 8-12, 17 and 18, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwai et al in view of Ohsawa. Figure 11 of Iwai et al shows the basic claimed combination of a wafer treatment apparatus with cassette storage shelves located above an ultraclean workroom, as detailed above. It varies from claim 2 by having only one locking unit, the transfer unit at 159/163 which lowers the cassettes (C) into ultraclean workroom (between walls 120 and 154) from the storage area (112). Ohsawa shows a similar treating apparatus with two locking units (4A and 4B) for feeding two processing chambers (3A and 3B). It would have been obvious to one of ordinary skill in the art to modify the wafer treating apparatus of Figure 11 of Iwai et al by having it arranged with two locking units and with two processing chambers, to increase production, as taught by Ohsawa. The locking units of Iwai et al have a sluice door (133) formed as a component of the cassette, see figure 15, as claims 3 and 5 are best understood. The sluice device is formed in a ceiling of the ultraclean room and in a floor of the storage room, as recited in claim 4. Iwai has a lifting device (163) at the locking unit, as recited in claim 8. The first manipulating means of Iwai would be between the two processing chambers, to the same degree as applicant's manipulating means is between the chambers, as claim 9 is best understood. Both the "first manipulating means" of Iwai et al and of Ohsawa have floor mounted linear guides, as recited in claim 10. Note that the floor mounted linear guide of Iwai et al is a vertical guide. The cassettes of Iwai et al are displaced between the storage spaces and the sluice device by a second manipulating device (118) mounted on a floor mounted linear guide (149), as recited in claims 11, 12, 17 and 18.

14. Applicant argued in the amendment after final filed April 13, 2004, that the claims are not in Jepson form but are in "European" form. However, by placing the phrase "is further characterized in" late in the claim, and by lacking a clear preamble, they are in Jepson form, more or less. And as this is not an European application, placing the claims in U.S. form is suggested.


15. Applicant also argued that the "accommodated in row and/or column arrangement does not render the claim indefinite. However as applicant has only disclosed an arrangement with rows and columns, it is unclear as to how the claims can be drawn to other arrangements.

16. Applicant also argued the rejection of claim 3 based on a the lack of a sluice door, that the bottom (63) of the cassette box (13) forms the door. However as the bottoms of the cassette boxes leave the sluice device

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when the cassette boxes are removed therefrom, the bottoms are not really doors that are associated with and form part of the locking units of the sluice device. Also, as noted above, the bottom (63) is a component of the cassette (12) not the cassette box (13), as recited in the claims.

17. An inquiry concerning this communication should be directed to Thomas J. Braham at telephone number (703) 308-2568. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for all patent applications is (703) 872-9306.


Thomas J. Braham
Primary Examiner
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